

Keeping it Clean



StormWater
MANAGEMENT

Storm Water Tips For “Fall”ing into Winter

Fall is here! As you button up your yard before Winter comes, are your Fall yard practices protecting our rivers and lakes? They are if you:

- ❑ **Keep your leaves and grass clippings out of the streets and storm drains.** – Yard plants that get into our waterways will rob aquatic life of oxygen as they decompose.
- ❑ **Direct your down spouts away from hard surfaces.** – Rainwater leaving your roof has collected pollutants that can be safely captured by your lawn. If it runs across hard surfaces and into the storm drains instead, run-off goes directly in our waterways without any treatment.
- ❑ **Remember that Fall is the best time for your lawn to be de-thatched, aerated, seeded, and fertilized (use phosphorous-free fertilizers at the correct rate!).** – Maintaining a healthy lawn reduces your need to use chemicals that can leave your lawn and enter our waterways where they harm aquatic life.

Since Winter is just around the corner, it's not too early to think about environmentally-friendly ways to control ice. Here's a brief introduction to the world of ice management.

Traction Agents – help prevent slipping on ice, but don't melt it.

Sand, kitty litter, and ashes can hurt vegetation, clog sewers, and degrade aquatic habitats. Cracked corn has been suggested as an alternative because animals can eat it before it gets washed into the storm sewers in the spring.

Deicers – lower the melting point of ice to help remove ice and snow from pavement.

1. Sodium chloride (rock salt) is the most common product because it's effective & cheap. On the other hand, it is highly corrosive and ecologically damaging.
2. Calcium chloride is very effective (even at very low temperatures), but more expensive than rock salt. Because it is so effective, much less chemical can be applied making it more environmentally friendly than rock salt.
3. Potassium chloride and urea are both fertilizers that can harm vegetation if they are overused. They are more expensive, but not as corrosive as rock salt.
4. Magnesium chloride is much like calcium chloride, but the application rate has to be twice as much because it is only 48% active.
5. Calcium magnesium acetate (CMA) is less problematic for soils, vegetation, water supplies, and concrete. It is non-corrosive, made from corn or petroleum and converts ice into an oatmeal-like mush. Compared to rock salt it is expensive, but a 50# bag of Landscaper's Choice™ is advertised for only \$10.00.
6. Potassium acetate is a reliable choice for smaller areas. It is a biodegradable liquid deicer with good ice melting capacity.
7. Corn-based liquid concentrates are emerging, primarily for roadway use and are applied as a spray.

Deicers become “**Anti-icers**” when they are applied as soon as the snowy or icy conditions appear; they help prevent the bond from forming between the pavement and the ice. This will make it easier to shovel (if it’s done soon after the storm) and reduce your need to use chemicals.

Here are some other things to keep in mind:

- Some de-icers (and even some sands) are significant sources of phosphorous pollution. Excess phosphorous is the nutrient that boosts unwanted plant growth in lakes. Look for products that contain 50 parts per million or less of phosphorous.
- Always apply deicing products according to manufacturer’s instructions. Deicers are not meant to provide complete evaporation of ice and snow. Rather, they are meant to break the ice/pavement bond to make shoveling easier. Over application of the chemical doesn’t eliminate the need to shovel...it only means more destructive chemicals get into our waterways. Pellets are generally more effective at penetrating ice than flakes.
- Using the old fashioned approach of a shovel and a flat hoe means eliminating ice and snow without harmful chemicals and with the added benefit of physical exercise.

What are the water-friendly picks? Try cracked corn as a traction agent until you can physically remove ice with a shovel and hoe. If deicing is important and within your budget, try a CMA product that is low in phosphorous and use only the recommended amount. Watch for low-phosphorous, corn-based liquid concentrates to become available on the residential market.

If you have water protection tips of your own, please send them to Barb Huberty at the Rochester Public Works Department, 201 4th St. SE, Room 108, Rochester, MN 55904 or via e-mail at bhuberty@ci.rochester.mn.us. For more information on storm water issues, check out the Rochester’s storm water web site: www.rochestermn.gov/stormwater.